

## **West Central Phoenix (WCP) North Plume**

### **Boundaries:**

The site is bounded approximately by Hazelwood Street to the north, 38th Avenue to the east, Indian School Road to the south and 43rd Avenue to the west.

### **Site History:**

- Volatile organic compounds (VOCs) were first detected in groundwater in the WCP area in July 1982. The City of Phoenix (COP) detected trichloroethylene (TCE) in four municipal public supply wells, COP #70, #71, #151, and #152. The Arizona Department of Health Services (ADHS), Salt River Project (SRP), and the COP confirmed the presence of VOCs in the groundwater with sampling in 1983, 1985, and 1986. Groundwater from COP Wells #70 and #71 contained the highest concentrations of TCE and, therefore, were immediately shut down. Wells #151 and #152 were monitored for VOC concentrations from 1982 until 1989. As a result of sampling conducted during February of 1989, COP elected to take both wells #151 and #152 off-line on March 7, 1989.
- In 1987, the WCP area was designated a Water Quality Assurance Revolving Fund (WQARF) Priority List site. In 1997, ADEQ established a Registry for WQARF Sites which replaced the Priority List.
- The site was placed on the WQARF Registry in April 1998 with a score of 50 out of a possible 120. The site score was re-evaluated in 2000 with a revised score of 55.

### **Site Status:**

- The remedial investigation (RI) continues, currently centered around four facilities: F&B Mfg. Co. (F&B) Facility, Rinchem Facility, Hill Brothers Facility, and Pyramid Industries Facility.
- ADEQ plans to issue a draft RI report, and water and land use report by June 2004. ADEQ continues to monitor groundwater quality and conducted its latest quarterly groundwater sampling event in December 2003.
- On September 30, 2003, ADEQ received the second payment required under the 1999 Consent Decree between ADEQ and F&B Mfg. Co. A minimum amount of \$250,500, which represented 1.67% of \$15 million (minimum annual net sales required under the Consent Decree) was received.
- The soil vapor extraction (SVE) treatment system (SVETS) at the F&B Facility continues to operate successfully. ADEQ's contractor continues to submit Operation and Evaluation Reports evaluating the performance of the SVE system. To date, over 41,000 pounds of PCE have been removed from the soil beneath the facility.

- As required under ARS §49-287.03(C), ADEQ and Hill Brothers entered into an agreement to conduct a passive soil-gas survey. The passive soil-gas sampling at the facility began on February 22-23, 2003. The samplers were removed on March 8, 2003. ADEQ received a final report in August 2003. ADEQ provided comments on the report and expects to conduct a technical meeting with Hill Brothers in early 2004.

### **Site Hydrogeology:**

- The site is located within the West Salt River Valley sub-basin of the Phoenix Active Management Area (AMA). The Salt River Valley is an alluvial filled basin located in the Basin & Range physiographic province.
- The site is underlain by silty sands and sandy silts with interbedded clay layers and gravelly sand zones from ground surface to approximately 80 feet below ground surface (bgs). This unit is referred to as the upper alluvial unit (UAU). Beneath that, a 350 foot thick fine grained unit consisting of primarily silt, clay with silty sand and gravel interbeds exists. This is referred to as the middle alluvial unit (MAU). Within the MAU beneath the site, there is one prominent, laterally continuous coarse-grained interval that is approximately 30 feet thick. This unit is encountered at a depth of approximately 250-280 feet bgs. Beneath the MAU, the lower alluvial unit (LAU) is encountered, which overlies bedrock. A bedrock graben has been interpreted to exist beneath the site. This graben trends northeast - southwest and dips gradually to the southwest. It is bounded by normal faults that are possibly associated with a large concealed fault known as the Grand Avenue Fault. The Grand Avenue Fault trends northwest and lies northeast of the site. The LAU is either absent or thin along the up-thrown sides of the normal faults beneath the site, and can be as much as 200 feet thick in the down-dropped block.
- Depth to groundwater has declined in the past several years. This is attributed principally to the ongoing drought. In 1999, the depth to groundwater in the UAU was approximately 122 feet bgs. By 2002, the depth to groundwater was approximately 132 feet bgs. The site sits along a groundwater divide in the UAU, with groundwater flowing to the northwest across most of the site and to the southwest in the far southern part of the site. The gradient is approximately 0.003. The coarse grained interval in the MAU acts as a groundwater sink, with water level elevations approximately 30 feet lower than the UAU and approximately 15 feet lower than the LAU. Groundwater flow direction in the coarse grained interval in the MAU is to the west.

### **Contaminants:**

The current contaminants of concern in groundwater include the chlorinated solvents tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE) vinyl chloride, and chromium. Other contaminants at the site include: benzene, toluene, ethylbenzene, total xylenes, methyl tertiary butyl ether (MTBE), and nitrates. Contaminants of concern at the site may change as new data become available.

**Public Health Impact:**

To date, testing in the WCP area indicates no exposure to the contamination. Sampling shows that the contaminated soils are under asphalt parking lots or asphalt-surfaced storage areas, or under the concrete floors of buildings. Contaminated drinking water wells in the area have been shut down. In addition, notices have been sent out to all known residences within the WCP area for the testing of domestic wells for contamination.

**Community Involvement Activities:**

A community advisory board (CAB) has been formed for the site and meets on a regular basis. These meetings are open to the public. The CAB meeting agendas and minutes can be viewed at <http://www.adeq.az.us/environ/waste/sps/reg.html>.

**Information Repositories:**

Interested parties can review site information at the Information Repository at the Burton Barr Central Library (Arizona Room) located at 1221 North Central Avenue in Phoenix (602) 262-4636. Site information is also available at the ADEQ main office located at 1110 West Washington Street, Phoenix. Site information is available for review Monday through Friday from 8 a.m. to 5 p.m. To arrange for a time to review the public site file, please call the ADEQ Records Center (602) 771-4378 or (800) 234-5677 (Arizona toll free).

**Contacts:**

<b>Name</b>	<b>Phone/Fax</b>	<b>E-mail</b>
Ana I. Vargas, ADEQ Project Manager	(602) 771-4178*/ (602) 771-4272	vargas.ana@ev.state.az.us
Monica Mascareno, ADEQ Community Involvement Coordinator	(602) 771-4710*/ (602) 771-4272	mascareno.monica@ev.state.az.us

\*In Arizona, but outside the Phoenix area, call toll-free at (800) 234-5677.